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ABSTRACT

This study was conducted to explore the impact of several aspects of self-efficacy expectations in relation to the vocational considerations of high school students. Career self-efficacy expectations and decision making by male (N=132) and female (N=92) high school students in general education (N=108), special education (N=41), and an alternative high school program (N=75) were examined. Students completed the Career Decision Scale, the Occupational Self-Efficacy Scale (modified version), the Career Decision Making Self-Efficacy Scale (modified version), and a background questionnaire. Gender based differences were found in relation to the occupations considered and self-efficacy estimates. Males reported lower career self-efficacy estimates and restricted consideration of cross-gender options as compared to females. Results also indicated that students in general education reported greater self-efficacy expectations compared to special education or alternative education students. Stepwise multiple regression analyses with employment consideration of gender biased occupations and career decidedness as the dependent variables yielded results that varied by educational placement. (Author/NB)

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Impact of Self-Efficacy Expectations on Adolescent Career Choice *

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Abstract

Career self-efficacy expectations and decision making by male (N=132) and female (N=92) high school students in general education (N=108), special education (N=41) and an alternative high school program (N=75) were examined. Gender based differences occurred in relation to the occupations considered and self-efficacy estimates. Males reported lower career self-efficacy estimates and restricted consideration of cross-gender options as compared to females. Results also indicated that students in general education reported greater self-efficacy expectations compared to special education or alternative education students. Stepwise multiple regression analyses with employment consideration of gender biased occupations and career decidedness as the dependent variables yielded results that varied by educational placement.

Impact of Self-Efficacy Expectations on Adolescent Career Choice

The passage from adolescence to adulthood is marked by a number of developmental tasks. Progress towards career selection by the adolescent can help ensure a smoother transition into the responsibilities of adulthood. In order to establish a career goal, the adolescent continues to develop attitudes about occupations, gains knowledge about various vocations and begins to implement career decision making skills. Although a "final" vocational decision is typically not made during adolescence, academic choices and occupational expectations can have an impact on career selection. If it is assumed that an individual's eventual career choice partly results from the culmination of these early choices and expectations, it follows that studying factors which influence the career decision making process during adolescence is important.

Theoretical Rational

Albert Bandura's (1977, 1986) social learning theory served as the theoretical rationale for this study. According to Bandura, behavior results from a triadic interaction between cognitions, environmental factors, and behaviors. Within the area of cognitions, self-efficacy expectations are of prime importance. These expectations are a system of beliefs regarding one's confidence in being able to perform a particular task. Self-efficacy

expectations can influence which behaviors are attempted as well as the persistence and effort expended in relation to these behaviors when negative experiences are encountered.

Bandura's social learning theory was first utilized in relation to career choice by Hackett and Betz (1981) as a means of explaining the underrepresentation of women in traditionally male occupations. They contended women had developed sexually stereotyped expectations for failure in male dominated fields and, as a result, tended not to pursue such occupations. Subsequent research has supported the relationship between career self-efficacy beliefs and various indices of career choice (Bores-Rangel et al., 1990; Lauver & Jones, 1991; Matsui, Ikeda & Ohnishi, 1989; Post-Kammer & Smith, 1985, 1986; Wheeler, 1983).

Self-efficacy expectations have also been examined in terms of the skills and behaviors needed for career decision making (Taylor & Betz, 1983). Results indicated that lower self-efficacy expectations for the performance of career decision making tasks were related to career indecision. Similar findings have been reported by Taylor and Popma (1990).

Purpose

The purpose of the present study was to explore the impact of several aspects of self-efficacy expectations in relation to the vocational considerations of high school students. Included within this research is an examination of self-efficacy expectations in relation to the successful

completion of educational/training programs and the performance of job duties of gender biased occupations. Estimates of self-efficacy for the performance of career decision making tasks were also examined in relation to career indecision. In addition, this research was designed to extend the career self-efficacy literature by focusing on those adolescents considered "at-risk" for future employment problems given the learning, emotional or behavioral difficulties they have experienced. The possible variation in career self-efficacy expectations as a function of academic history was also explored. The results of this research can be used to further identify the areas of vocational need when counseling students.

Method

Subjects

This study involved a total of 225 students who were divided into three groups: students in general education (N=108), students in special education (N=41) and those attending an alternative high school program (N=75). Ot these students, forty-five were freshmen, 55 were sophomores, 69 were juniors and 54 were seniors. Ninety-two subjects were female and 132 were male. These subjects were recruited from a suburban school district in the metropolitan Detroit area.

Data Collection and Instrumentation

Data for the study were gathered by administering four questionnaires to students during a class period. These questionnaires included: The Career Decision Scale (CDS), The Occupational Self-Efficacy Scale (OSES) (Modified Version), The Career Decision Making Self-Efficacy Scale (CDMSES) (Modified Version) and a background questionnaire.

Studies have shown the CDS to be a reliable instrument. Test-retest reliability studies have reported two week reliability correlations for college students of .90 and .82. (Osipow, Carney & Barak, 1976). Subsequent research by Slaney, Palko-Nonemaker & Alexander (1981) reported a six week reliability coefficient of .70 for the total Career Decision Scale. Various studies (Buck & Daniels, 1985; Osipow & Schweikert, 1981; and Slaney, 1980) have supported the validity of the CDS.

The CDMSES has been reported to have high internal reliability (coefficient alpha=.97) and has been used in a number of studies (Robbins, 1985; Taylor & Popma, 1990).

Reliability information on the OSES has been reported by Lauver and Jones (1991) in their study of high school students. Test-retest reliability coefficients of .66 and .65 respectively, over a six week period were reported for the range of career options considered in relation to female and male dominated occupations. When self-efficacy

expectations for the successful completion of the educational/training programs for female dominated careers were examined, a correlation coefficient of .77 was reported. A test-retest correlation coefficient of .75 was reported for self-efficacy expectations in relation to the performance of the job duties of female biased occupations. These same factors were considered in relation to male dominated occupations. Correlation coefficients of .72 and .76 were identified.

Data Analyses and Results

A series of one-way analyses of variance (ANOVA) were performed with grouping variables of gender and educational placement. Specific differences between educational placement were determined by post-hoc Scheffe multiple comparison tests performed at an alpha level of $p<.05$. A series of stepwise multiple regression analyses with occupational considerations, self-efficacy estimates and career decidedness as the dependent variables were also conducted.

Results indicated that males and females reported greater consideration of occupations dominated by members of their own gender. Males ($M=3.8$) reported giving less consideration of employment in female dominated occupations compared to females ($M=8.9$) ($F=53.38$, $p<.01$). By contrast, males ($M=11.7$) reported greater employment consideration of

male dominated occupations than females (M=7.9) (F=20.97, p<.01). See Figure 1.

Insert Figure 1 about here.

Self-efficacy expectations for the successful performance of job duties of gender biased occupations were also influenced by the respondent's gender. Females reported greater self-efficacy for performing the job duties of female dominated occupations (M=26.29) as compared to males for these same occupations (M=20.8) (F=12.45, p<.01). By contrast, males reported greater self-efficacy in relation to performing the job duties of male dominated occupations (M=24.89) as compared to self-efficacy reported by females (M=20.94) (F=9.19, p<.01). See Figure 2.

Insert Figure 2 about here.

This pattern varied when self-efficacy for the successful completion of the educational/training programs for gender biased occupations was considered. Females (M=26.93) reported greater self-efficacy in relation to female dominated occupations as compared to males (M=21.25) (F=12.54, p<.01). However, when male biased occupations were considered, the self-efficacy expectations of males

(M=24.28) and females (M=22.52) did not differ (F=1.60, p>.01). These findings are shown in Figure 3.

Insert Figure 3 about here.

The relationship between decision making self-efficacy expectations and career indecision was also examined. Results reflected a significant negative relationship between these variables (Pearson r=-.34, p<.001). Career decision making self-efficacy expectations also differed by educational placement (F=3.13, p=.046). General education students reported greater self-efficacy (M=151.96) than their "at-risk" counterparts (alternative education students M=142.97 and special education students M=135.14).

Stepwise multiple regression analyses employing career considerations of gender biased occupations as the dependent variable were performed. Predictor variables included self-efficacy expectations for the successful completion of education and training programs for predominantly male and female occupations, self-efficacy expectations for the successful completion of job duties of predominantly female and male occupations, grade point, sex, family SES and self-efficacy for career decision making activities. Analyses yielded equations which differed by educational placement in relation to several of these variables.

When employment considerations of female dominated occupations were utilized as the dependent variable for students in regular education, sex accounted for 24% of the

variance. Sex accounted for 27% of the variance when the responses of students in special education were assessed. When considering the responses of students in alternative education, self-efficacy for the successful completion of educational/training programs for female dominated occupations accounted for 19.69% of the variance. These results are reported in Table 1.

Insert Table 1 about here.

An analysis was also conducted utilizing employment considerations in male dominated occupations as the dependent variable for students in regular education. In this instance, sex accounted for 11.51% of the variance in relation to their responses. Family SES accounted for 24.88% of the variance in relation to the responses of students in special education. When considering students in alternative education, self-efficacy for the ability to successfully perform the job duties of predominantly male occupations accounted for 40.05% of the variance. These results are presented in Table 2.

Insert Table 2 about here.

When a stepwise multiple regression analysis was conducted utilizing career decidedness as the dependent variable, self-efficacy expectations for the performance of career decision making tasks accounted for the greatest variance (16.10%).

Discussion

The present study supports the importance of cognitive-mediational factors, such as self-efficacy expectations, in relation to career decision making. Significant gender based differences were found with regard to the career considerations of male and female dominated occupations as well as self-efficacy expectations for the successful performance of job duties of gender biased occupations. While the responses of males and females reflected comparable self-efficacy expectations for the completion of educational/training programs for male dominated careers, these self-efficacy expectations differed for female dominated occupations.

These findings indicate that high school males tend to demonstrate greater sexually stereotyped behavior in relation to occupational considerations for future employment. By comparison, high school females were less constrained in considering cross-gender careers. Similar gender differences have been reported by Lauver and Jones (1991) in their study utilizing a rural high school population. Given the above findings, the relative lack of consideration of cross-gender occupations by males suggests that attention needs to be given to broadening male career options as well as further exploring factors which would account for this finding. A possible explanation for such findings has been provided by Clement (1987). She speculated that males may not be attracted to cross-gender

occupations because of differences in perceived status or in the pay for "female" jobs. In addition, efforts should be continued to ensure gender equity in the career choices of females.

Results also indicated that as self-efficacy for performing tasks associated with career decision making increased, career indecision decreased. The ability to perform the various component tasks of career decision making appears to contribute to the ability to make career choices. Given the correlational association demonstrated by these results, further research to explore this cause and effect relationship should be conducted.

Career decision making self-efficacy expectations differed by student's educational placement according to the present results. Students in general education reported the greatest sense of self-efficacy followed by students in alternative education. Students receiving special education support reported the least self-efficacy. One possible hypothesis for these findings is that students in general education, as compared to "at-risk" students, are more confident in their ability to perform behaviors and tasks required for effective career decision making. Such differences should be considered when counseling high school students. Students who lack confidence in their ability to complete the component tasks required for career decision making should be assisted in developing these skills.

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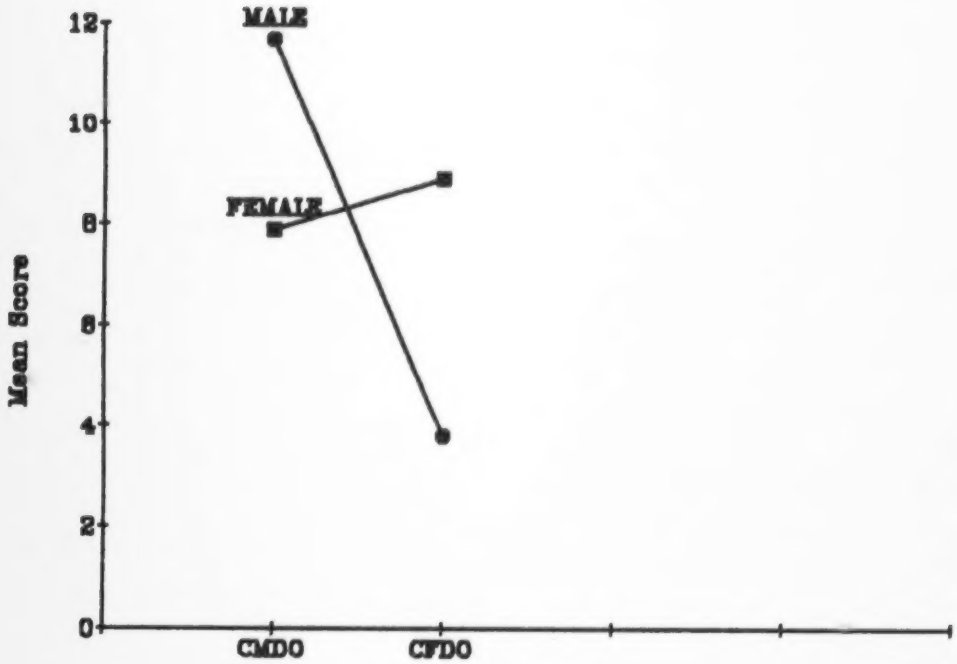
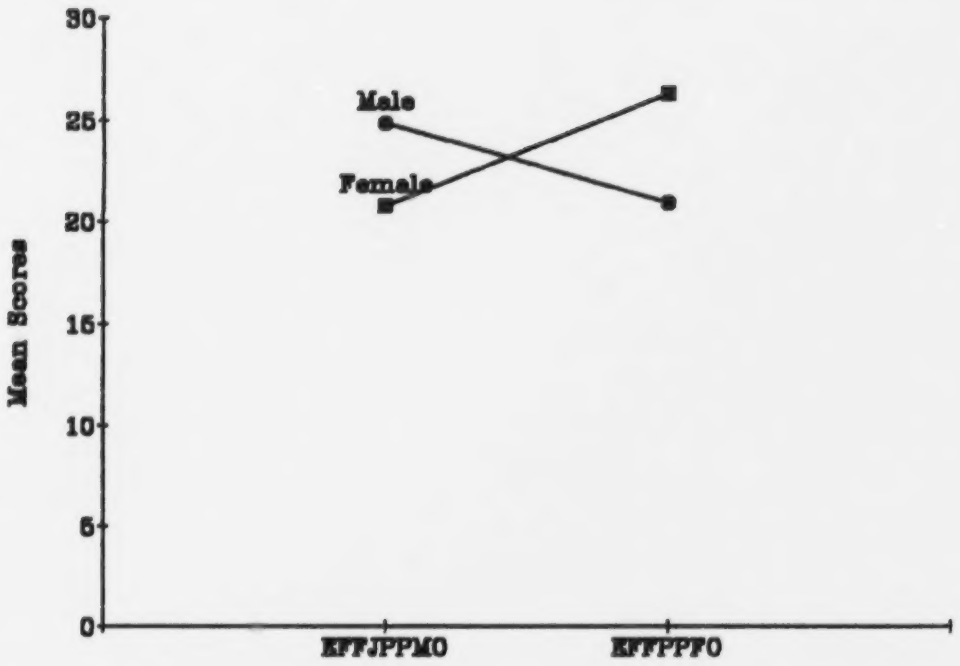


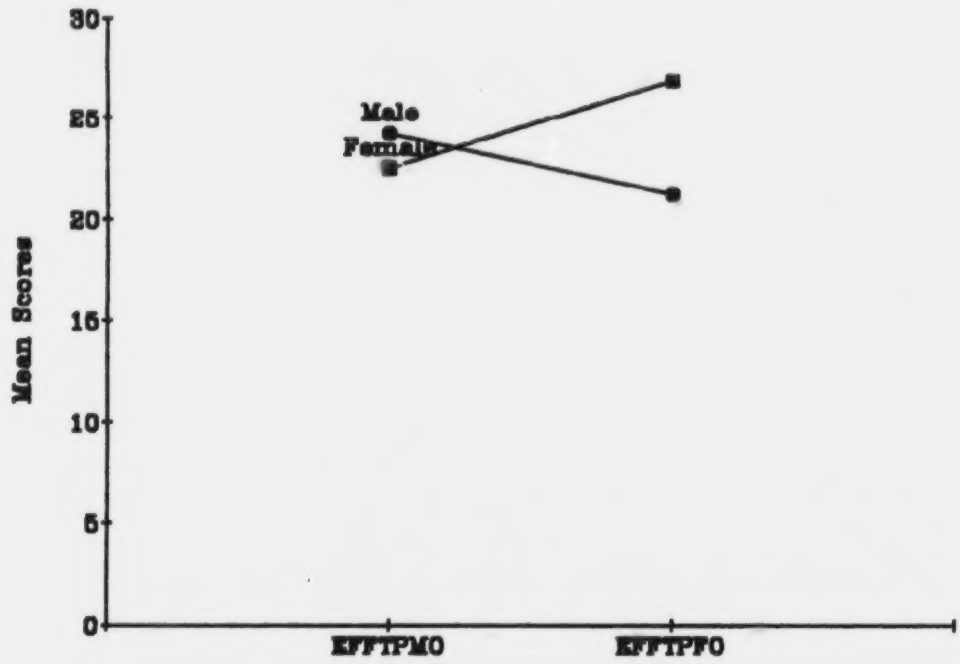
CMDO = Consideration in male dominated occupations
CFDO = Consideration in female dominated occupations

Figure 1. Subjects' consideration of gender related occupations.



EFFJPPMO = Self-efficacy for performing job duties of male dominated occupations
EFFPPFO = Self-efficacy for performing Job duties of female dominated occupations

Figure 2. Self-efficacy for the performance of job duties of predominantly male and female occupations by gender.



EFFJPPMO= Self-efficacy for the completion of education/training programs for male dominated occupations

EFFJPFO= Self-efficacy for the completion of education /training programs for female dominated occupations

Figure 3. Self-efficacy expectations for the successful completion of education and training programs for gender based occupations by gender.

Table 1. Summary of Stepwise Multiple Regression Analyses with Range of Female Dominated Occupations Considered as the Dependent Variable.

Sig. Pred	Students in Gen Ed. F(29)*	Students in Spec Ed. F(6.74)*	Students in Alt Ed. F(12)*
Gender	24%	27%	-
Self-Efficacy 1	-	-	20%
R	.49	.52	.44

Self-efficacy 1=Self-efficacy expectations for the successful completion of educational/ training programs for female dominated occupations
Dashes indicate not applicable
*=sig. .05 level

Table 2. Summary of Stepwise Multiple Regression Analyses with Range of Male Dominated Occupations Considered as the Dependent Variable.

Sig. Pred	Students in Gen Ed. F(11.7)*	Students in Spec Ed. F(5.96)*	Students in Alt Ed. F(33)*
Gender	11%	-	-
Self-Efficacy 2	-	-	40%
Family SES	-	25%	-
R	.34	.50	.63

Self-efficacy 2=Self-efficacy for the ability to successfully perform the job duties of predominantly male occupations
Dashes indicate not applicable
*=sig. .05 level